# Jamb Connection
# Supplement

This document provides a series of connection schedules and basic detailing concepts for the connection of garage door jambs to building frames with the use of various fasteners. DASMA Technical Data Sheet TDS-161 may be used as an alternate to this document.

## SCHEDULE 1
## 3/8" DIAMETER x 3" LONG LAG SCREWS

| LOAD PER JAMB (LB/FT)[NOTE 3] | MAXIMUM SPACING OF LAG SCREWS PER JAMB (IN) | | |
|---|---|---|---|
| | MAIN SUPPORT MEMBER SPECIES | | |
| | SYP SPECIFIC GRAVITY - 0.55 | DOUGLAS FIR SPECIFIC GRAVITY - 0.46 | SPF SPECIFIC GRAVITY - 0.42 |
| 100 | 24 | 24 | 24 |
| 120 | 24 | 24 | 24 |
| 140 | 24 | 24 | 24 |
| 160 | 24 | 24 | 24 |
| 180 | 24 | 24 | 24 |
| 200 | 24 | 24 | 23 |
| 220 | 24 | 24 | 21 |
| 240 | 24 | 22 | 19 |
| 260 | 24 | 20 | 17 |
| 280 | 24 | 18 | 16 |
| 300 | 23 | 17 | 15 |
| 320 | 21 | 16 | 14 |
| 340 | 20 | 15 | 13 |
| 360 | 19 | 14 | 12 |
| 380 | 18 | 13 | 12 |
| 400 | 17 | 13 | 11 |
| 420 | 16 | 12 | 11 |
| 440 | 15 | 12 | 10 |
| 460 | 15 | 11 | 10 |
| 480 | 14 | 11 | 9 |
| 500 | 13 | 10 | 9 |
| 520 | 13 | 10 | 8 |
| 540 | 12 | 9 | 8 |
| 560 | 12 | 9 | 8 |
| 580 | 11 | 9 | 7 |
| 600 | 11 | 8 | 7 |
| 620 | 11 | 8 | 7 |
| 640 | 10 | 8 | 7 |
| 660 | 10 | 8 | 7 |
| 680 | 10 | 7 | 6 |
| 700 | 9 | 7 | 6 |
| 720 | 9 | 7 | 6 |
| 740 | 9 | 7 | 6 |
| 760 | 9 | 6 | 6 |
| 780 | 8 | 6 | 5 |
| 800 | 8 | 6 | 5 |

1. BASED ON 3/8" DIAMETER x 3" LONG LAG SCREWS WITH 1" O.D. WASHERS WITH A 1-9/32" THREAD PENETRATION INTO SEASONED DRY WOOD SUPPORTING STRUCTURE.
2. PROVIDE QUANTITY OF LAG SCREWS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) LAG SCREWS PER JAMB. LAG SCREWS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

       EXAMPLE:       DESIGN LOAD = 30psf
                          DOOR WIDTH = 16ft
                          LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. MINIMUM EDGE DISTANCE SHALL BE 1-1/2" AND HOLES SHALL BE PRE-DRILLED TO PREVENT SPLITTING.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-1997.
9. LAG SCREWS SHALL CONFORM TO ANSI / ASME STANDARD B18.2.1.

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Revision P7

## SCHEDULE 2
## 16d COMMON WIRE NAILS AND 16d THREADED HARDENED-STEEL NAILS

| LOAD PER JAMB (LB/FT)[NOTE 3] | MAXIMUM NAIL SPACING PER JAMB (IN) | | |
|---|---|---|---|
| | MAIN SUPPORT MEMBER SPECIES | | |
| | SYP SPECIFIC GRAVITY - 0.55 | DOUGLAS FIR SPECIFIC GRAVITY - 0.46 | SPF SPECIFIC GRAVITY - 0.42 |
| 100 | 24 | 19 | 15 |
| 120 | 24 | 16 | 13 |
| 140 | 21 | 14 | 11 |
| 160 | 19 | 12 | 9 |
| 180 | 17 | 10 | 8 |
| 200 | 15 | 9 | 7 |
| 220 | 13 | 8 | 7 |
| 240 | 12 | 8 | 6 |
| 260 | 11 | 7 | 6 |
| 280 | 10 | 7 | 5 |
| 300 | 10 | 6 | 5 |
| 320 | 9 | 6 | 4 |
| 340 | 9 | 5 | 4 |
| 360 | 8 | 5 | 4 |
| 380 | 8 | 5 | 4 |
| 400 | 7 | 4 | 3 |
| 420 | 7 | 4 | 3 |
| 440 | 6 | 4 | 3 |
| 460 | 6 | 4 | 3 |
| 480 | 6 | 4 | 3 |
| 500 | 6 | 3 | 3 |
| 520 | 5 | 3 | 3 |
| 540 | 5 | 3 | 2 |
| 560 | 5 | 3 | 2 |
| 580 | 5 | 3 | 2 |
| 600 | 5 | 3 | 2 |
| 620 | 4 | 3 | 2 |
| 640 | 4 | 3 | 2 |
| 660 | 4 | 2 | 2 |
| 680 | 4 | 2 | 2 |
| 700 | 4 | 2 | 2 |
| 720 | 4 | 2 | 2 |
| 740 | 4 | 2 | 2 |
| 760 | 4 | 2 | 2 |
| 780 | 3 | 2 | 2 |
| 800 | 3 | 2 | 2 |

1. BASED ON 16d COMMON WIRE NAILS (0.162"x3-1/2") OR 16d THREADED HARDENED-STEEL NAILS (0.148"x3-1/2") WITH A MINIMUM PENETRATION OF 2" INTO SIDE GRAIN OF MAIN MEMBER.
2. NAILS SHALL BE PROVIDED IN PAIRS AT A MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) PAIRS OF NAILS PER JAMB. NAILS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

      EXAMPLE:      DESIGN LOAD = 30psf
                        DOOR WIDTH = 16ft
                        LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
6. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
7. EDGE DISTANCES, END DISTANCES AND SPACINGS SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-1997.

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## SCHEDULE 3
## 3/8"Ø A307 HEADED OR HOOKED ANCHOR BOLTS

| LOAD PER JAMB (LB/FT)[NOTE 3] | MAXIMUM SPACING OF ANCHOR BOLTS PER JAMB (IN) | | |
|---|---|---|---|
| | 2000 PSI CONCRETE | 2500 PSI CONCRETE | 3000 PSI CONCRETE |
| 100 | 24 | 24 | 24 |
| 120 | 24 | 24 | 24 |
| 140 | 24 | 24 | 24 |
| 160 | 24 | 24 | 24 |
| 180 | 24 | 24 | 24 |
| 200 | 24 | 24 | 24 |
| 220 | 24 | 24 | 24 |
| 240 | 24 | 24 | 24 |
| 260 | 24 | 24 | 24 |
| 280 | 24 | 24 | 24 |
| 300 | 24 | 24 | 24 |
| 320 | 24 | 24 | 24 |
| 340 | 23 | 24 | 24 |
| 360 | 22 | 24 | 24 |
| 380 | 21 | 23 | 24 |
| 400 | 20 | 22 | 23 |
| 420 | 19 | 21 | 22 |
| 440 | 18 | 20 | 21 |
| 460 | 17 | 19 | 20 |
| 480 | 16 | 18 | 19 |
| 500 | 16 | 18 | 18 |
| 520 | 15 | 17 | 18 |
| 540 | 14 | 16 | 17 |
| 560 | 14 | 16 | 16 |
| 580 | 13 | 15 | 16 |
| 600 | 13 | 15 | 15 |
| 620 | 13 | 14 | 15 |
| 640 | 12 | 14 | 14 |
| 660 | 12 | 13 | 14 |
| 680 | 11 | 13 | 13 |
| 700 | 11 | 12 | 13 |
| 720 | 11 | 12 | 13 |
| 740 | 10 | 12 | 12 |
| 760 | 10 | 11 | 12 |
| 780 | 10 | 11 | 12 |
| 800 | 10 | 11 | 11 |

1. BASED ON 3/8"Ø A307 HEADED OR HOOKED ANCHOR BOLTS WITH A 1" O.D. WASHER WITH A MINIMUM EMBEDMENT DEPTH OF 3" AND A MINIMUM EDGE DISTANCE OF 3".
2. PROVIDE QUANTITY OF ANCHOR BOLTS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) ANCHOR BOLTS PER JAMB. ANCHOR BOLTS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
3. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

       EXAMPLE:       DESIGN LOAD = 30psf
                               DOOR WIDTH = 16ft
                               LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

4. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
5. CHART INCLUDES A SAFETY FACTOR OF 4.
6. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
7. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 3.
8. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-1997 AND ACI 318-02.

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# SCHEDULE 4
## 3/8"Ø SIMPSON TITEN HD SCREW ANCHORS

| LOAD PER JAMB (LB/FT)[NOTE 4] | MAXIMUM SPACING OF ANCHORS PER JAMB (IN) | | |
|---|---|---|---|
| | 2000 PSI CONCRETE[NOTE 1] | 4000 PSI CONCRETE[NOTE 1] | 2000 PSI GROUT FILLED CMU[NOTE 2] |
| 100 | 24 | 24 | 24 |
| 120 | 24 | 24 | 24 |
| 140 | 24 | 24 | 24 |
| 160 | 24 | 24 | 24 |
| 180 | 24 | 24 | 24 |
| 200 | 24 | 24 | 24 |
| 220 | 24 | 24 | 24 |
| 240 | 24 | 24 | 24 |
| 260 | 24 | 24 | 24 |
| 280 | 24 | 24 | 24 |
| 300 | 24 | 24 | 24 |
| 320 | 24 | 24 | 22 |
| 340 | 24 | 24 | 21 |
| 360 | 24 | 24 | 20 |
| 380 | 24 | 24 | 18 |
| 400 | 23 | 23 | 18 |
| 420 | 22 | 22 | 17 |
| 440 | 21 | 21 | 16 |
| 460 | 20 | 20 | 15 |
| 480 | 19 | 19 | 15 |
| 500 | 18 | 18 | 14 |
| 520 | 18 | 18 | 13 |
| 540 | 17 | 17 | 13 |
| 560 | 16 | 16 | 12 |
| 580 | 16 | 16 | 12 |
| 600 | 15 | 15 | 12 |
| 620 | 15 | 15 | 11 |
| 640 | 14 | 14 | 11 |
| 660 | 14 | 14 | 10 |
| 680 | 13 | 13 | 10 |
| 700 | 13 | 13 | 10 |
| 720 | 13 | 13 | 10 |
| 740 | 12 | 12 | 9 |
| 760 | 12 | 12 | 9 |
| 780 | 12 | 12 | 9 |
| 800 | 11 | 11 | 9 |

1. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1" O.D. WASHER INTO CONCRETE WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 2-3/4".
2. BASED ON 3/8"Ø SIMPSON TITEN HD SCREW ANCHOR WITH A 1" O.D. WASHER INTO GROUT FILLED CMU WITH A MINIMUM EMBEDMENT DEPTH OF 2-3/4", A MINIMUM EDGE DISTANCE OF 4", AND A MINIMUM END DISTANCE OF 4". CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND GROUT SHALL CONFORM TO ASTM C476.
3. PROVIDE QUANTITY OF SCREW ANCHORS AS REQUIRED TO MAINTAIN MAXIMUM SPACING AS SHOWN IN TABLE WITH A MINIMUM OF THREE (3) SCREW ANCHORS PER JAMB. SCREW ANCHORS AT TOP AND BOTTOM OF JAMB SHALL BE PLACED A MAXIMUM OF 6" FROM THE END OF THE JAMB.
4. LOAD PER JAMB CALCULATED BY TAKING DESIGN LOAD (PSF) TIMES DOOR WIDTH (FT) DIVIDED BY 2.

EXAMPLE:    DESIGN LOAD = 30psf
            DOOR WIDTH = 16ft
            LOAD PER JAMB = 30psf x 16ft/2 = 240lb/ft

5. CHART IS BASED ON 6'-6" MINIMUM AND 24'-0" MAXIMUM DOOR HEIGHT.
6. CHART INCLUDES A SAFETY FACTOR OF 4.
7. DOOR JAMB TO BE 2x6 NO. 2 GRADE SPF LUMBER OR BETTER MOUNTED DIRECTLY TO SUPPORT STRUCTURE.
8. DESIGN OF THE SUPPORT STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE BUILDING DESIGNER AND SHALL BE DESIGNED FOR THE JAMB LOAD LISTED IN ABOVE TABLE AS CALCULATED PER NOTE 4.
9. CALCULATIONS CONFORM TO ANSI/AF&PA NDS-1997 AND ACI 318-02.
10. SCREW ANCHORS SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

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REVISIONS

SEE DETAILS 1, 2, AND 3 — REQUIRED FOR VERTICAL POST REINFORCING SYSTEMS.

6" MAX.

FASTENERS PER SCHEDULES 1 THRU 4

MINIMUM 2x6 NO. 2 GRADE SPF LUMBER OR BETTER.

MAXIMUM SPACING

DOOR HEIGHT

6" MAX.

DOOR WIDTH



MINIMUM 2x6 #3 SOUTHERN PINE LUMBER.

℄ HEADER LOCK BRACKET

4"   4"

2-3/4"

(2) 3/8" SIMPSON TITEN HD SCREW ANCHOR WITH A 1 1/4" WASHER AND A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 2-3/4".
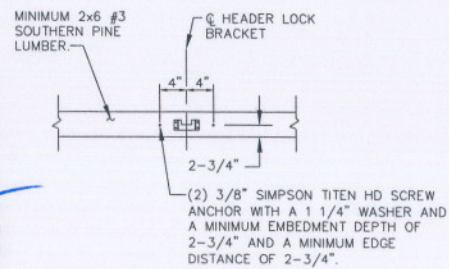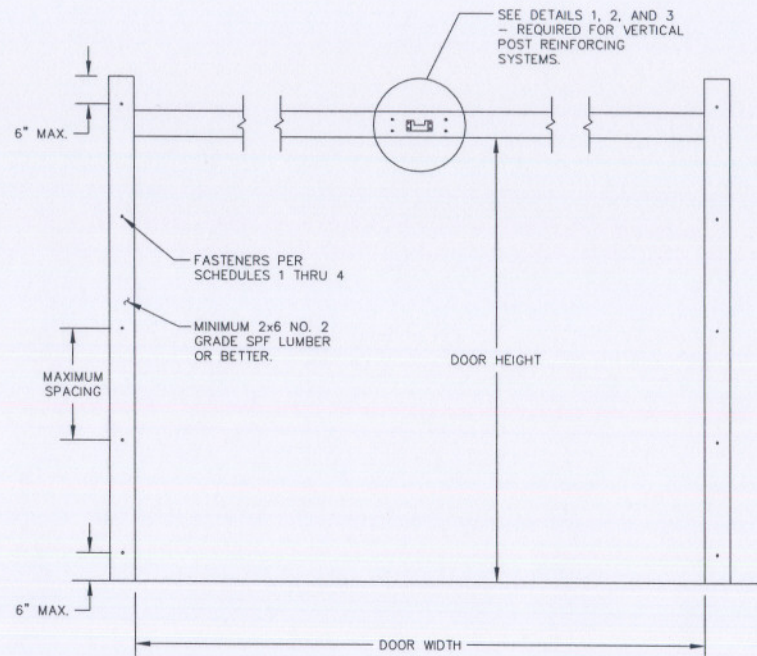
DETAIL 1
MINIMUM 2000 PSI CONCRETE

MINIMUM 2x6 #3 SOUTHERN PINE LUMBER.

℄ HEADER LOCK BRACKET

8"   4"   4"   8"

4"

(4) 3/8" SIMPSON TITEN HD SCREW ANCHOR WITH A 1-1/4" WASHER AND A MINIMUM EMBEDMENT DEPTH OF 2-3/4" AND A MINIMUM EDGE DISTANCE OF 4".
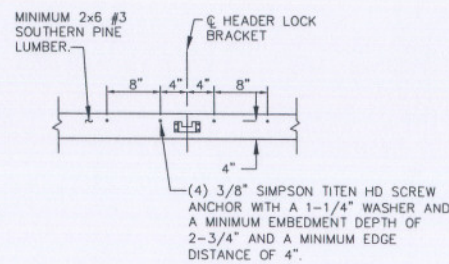
DETAIL 2
MINIMUM 2000 PSI GROUT FILLED CMU

MINIMUM 2x6 #3 SOUTHERN PINE LUMBER.

℄ HEADER LOCK BRACKET

4"   4"

1-1/2"   1-1/2"

(4) 3/8" DIA. x 3" LONG LAG SCREWS WITH 1 1/4" O.D. WASHERS.
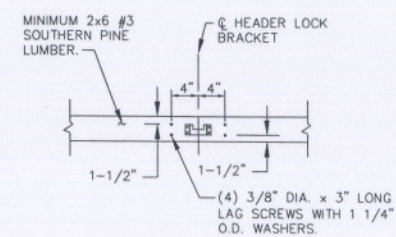
DETAIL 3
WOOD SUPPORT STRUCTURE

| | DATE | NAME |
|---|---|---|
| DRAWN | 5/24/07 | GRT |
| CHECKED | 5/24/07 | MRB |

JAMB CONNECTION SUPPLEMENT

| DRAWING PART NO. | REV. |
|---|---|
| 324620 | P7 |